3.2.2.1 CM Plans and Processes

3.2.2.1.1 *Purpose*
The procedure for implementing CM plans and processes is described below. It is applicable to Integrated Product Teams (IPT), Product Teams (PT) and other solution providers.

3.2.2.1.2 *Scope*
This procedure applies to the CM plans and processes to be documented by IPTs, PTs and other solution providers. (Special considerations apply to regional offices, whose plans and processes are described in Section 3.2.3.1). Each IPT, PT and solution provider should develop a CM plan. Additional documents may be useful depending upon the complexity of the CM tasks. Such documents may include, but are not limited to:

- A CM policy specific to the IPT, PT or solution provider
- A life-cycle CM process description
- A transition process description for each program
- An audit plan for each program.

3.2.2.1.3 *Responsibilities*
- The IPT/solution provider representative on an investment analysis team provides CM requirements for each candidate solution. They ensure that each candidate solution in the Acquisition Program Baseline has appropriate CM elements that are documented in Acquisition Strategy Papers (ASP) and Integrated Program Plans (IPP).

- The IPT/solution provider is responsible for CM planning commensurate with programs under its control and for documenting its processes and procedures in a CM Plan. This plan provides guidance in sufficient detail to allow tailoring of CM products for each life cycle phase of the programs under its control. Transition planning and budgeting are integral to overall CM planning activities.

- The PT reviews the IPT CM plan and identifies and documents the practices applicable to the specific program being acquired in its product team planning documentation (i.e., Acquisition Strategy Paper, Integrated Program Plan, product team CM plan, and transition process description).

- NAS Configuration Management and Evaluation Staff (ACM) provides:
  – high-level CM requirements for a program's initial requirements document
  – assistance and consultation as needed to the IPT/solution provider in generating their life cycle CM planning and management documentation.

3.2.2.1.4 References

Reference	Reference Para./Activity #:
• FAA Order 1800.66, Appendix 1, *Configuration Management in the National Airspace System*, Part One – Configuration Management (CM) Policy Elements	• Statements I-4.1 and III-1
• FAA Order 1800.66, Appendix 1, *Configuration Management in the National Airspace System*, Part Two, Configuration Management Handbook, Section II, National Configuration Management Process	• 8.1 Develop Acquisition Strategy Paper • 8.2 Develop Integrated Program Plan (IPP) • 8.2.1 Field Input to Integrated Program Plan (IPP) • 9 Plan and Manage Program CM • 9.1 Develop CM Plan and Practices • 9.1.1 Develop PT CM Teams Tailored Plans and Practices • 13.1 Execute CM Requirements Flow Down

3.2.2.1.5 Procedure

The IPT/solution provider shall determine the documentation required for CM planning. At a minimum, this documentation shall include a CM plan defining the requirements for implementing CM within the organization; however, additional documentation, (such as transition plans, tailored processes, audit plans, etc.), may be required, depending upon the complexity of the system or requirements of the contract. The IPT/solution provider shall assign an author or team of authors to document program specific processes.

After the documents are completed, the IPT/solution provider shall review the documentation. The author shall incorporate review comments into the draft, at which point it is submitted to the IPT or solution provider's CCB. The CCB shall provide an additional review of the documentation to ensure it does not conflict with other managerial considerations.

Following CCB approval, the IPT/solution provider shall forward the CM plan to team members and ACM. Additionally, the IPT/solution provider shall be responsible for implementing a CM program as detailed in the CM plan, including resource allocation and training.

Using the IPT/solution provider CM plan, the PT shall develop specific CM information for the Acquisition Strategy Paper, the Integrated Program Plan, and the PT CM plan. These documents define their CM requirements and activities for each life cycle phase for the specific product being acquired. The PT shall address CM transition requirements to ensure a smooth transfer of new NAS systems, software, facilities or services from the solution implementation phase to the in-service phase. PT CM plans are reviewed and approved in accordance with an IPT's CM process and procedures.

Procedural steps follow. Figure 3.2.2.1.5-1 is a graphical representation of these steps.

Procedure Step	Procedure Description
1. Determine Documentation Requirements	• The IPT/solution provider shall determine which documents in addition to a CM Plan are required for life cycle CM planning and management. • Additional planning documents, such as process descriptions, transition plans and audit plans, etc., may be included at the discretion of the IPT/solution provider.
2. Designate Author(s)	• The IPT/solution provider shall designate an author or a group of authors to write the planning documents.
3. Develop Documentation	• The appointed author(s) shall draft the CM plan and other documents. • The author(s) may contact ACM for assistance, as needed, to ensure documentation is in accordance with best CM practices and FAA policy. • The CM plan shall address the basic CM functions (configuration identification, configuration change control, configuration status accounting, and configuration audit), as well as applicable data management considerations, administrative concerns (budget, schedule, etc.) and transition planning requirements. A sample template is given in Table 3.2.2.1.5-1. • The author(s) shall ensure that additional planning documentation is consistent with the CM plan.

Procedure Step	Procedure Description
4. **Review Documentation**	• The IPT/solution provider shall review the draft CM plan and additional documentation (if used) with the appropriate IPT/solution provider team members.
5. **Revision Required?**	• If the draft CM plan and additional documentation are not deemed acceptable by the review, continue with Step 6. Otherwise proceed to Step 8.
6. **Revise Documentation**	• The author(s) shall revise the CM plan and other documents in accordance with the review comments.
7. **Review Required?**	• If the review comments are sufficiently extensive to require another review after incorporation of comments, proceed to Step 4. Otherwise continue with Step 8.
8. **Submit to Organizational CCB**	• The organizational CCB shall review the CM documentation.
9. **Documentation Approved?**	• If the organizational CCB approves the CM plan and additional documents, continue with Step 10. Otherwise proceed to Step 12.
10. **Disseminate CM Documentation**	• The IPT/solution provider shall disseminate the CM documents to IPT team members and ACM.
11. **Allocate Resources**	• The IPT/solution provider shall provide the resources, including training, specified by the CM plan and other documentation for the CM process.
12. **Incorporate CCB Comments**	• The designated author(s) shall incorporate comments from the CCB review into the CM plan and additional documentation. Proceed to Step 8.
13. **Develop Product Team CM Planning Documentation**	• The PT shall review the approved IPT CM plan and document those practices applicable to the specific program being acquired in its product team planning documentation (i.e., ASP, IPP, PT CM plan, and transition process description).

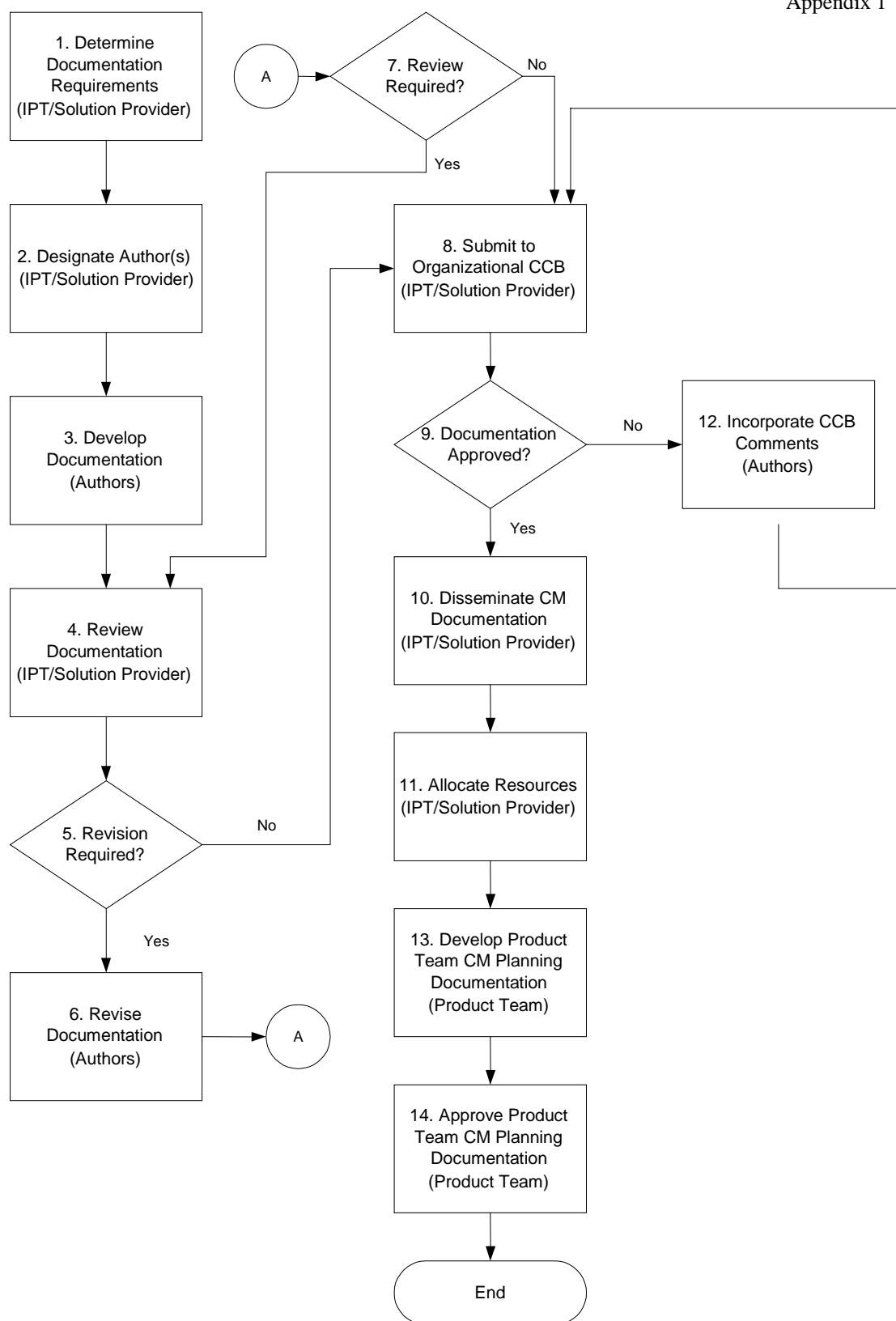| Procedure Step	Procedure Description
14. Approve Product Team CM Planning Documentation	• The PT CM planning documentation shall be reviewed and approved in accordance with the IPT's CM process and procedures.

1. Determine Documentation Requirements (IPT/Solution Provider)

A → 7. Review Required?

No

Yes

2. Designate Author(s) (IPT/Solution Provider)

8. Submit to Organizational CCB (IPT/Solution Provider)

3. Develop Documentation (Authors)

9. Documentation Approved?

No → 12. Incorporate CCB Comments (Authors)

Yes

4. Review Documentation (IPT/Solution Provider)

10. Disseminate CM Documentation (IPT/Solution Provider)

5. Revision Required?

No

11. Allocate Resources (IPT/Solution Provider)

Yes

13. Develop Product Team CM Planning Documentation (Product Team)

6. Revise Documentation (Authors) → A

14. Approve Product Team CM Planning Documentation (Product Team)

End

Figure 3.2.2.1.5-1. CM Plans and Processes

Table 3.2.2.1.5-1. Sample CM Plan Template

CM Plan Section	Section Content
a. Cover Page	Includes the document title, effective date, and document control number.
b. Table of Contents	Lists the title and page number of all titled sections and subsections, followed by the title and page number of all figures, tables, and appendices.
c. Section 1 – Introduction	Includes the following: • The purpose and scope of the plan • A brief description of the IPT/solution provider organization • A description of the organization's major functions and programs
d. Section 2 – Reference Documents	Lists the specifications, standards, manuals, and other reference documents by title, document number, issuing authority, revision, and date of issue.
e. Section 3 – Organization	Includes the following: • Relationships and integration of IPT/solution provider organization and CM organization • Responsibility and authority for CM of all participating organizations and team members, including their role in configuration control boards • Identification of the IPT/solution provider CM organization • Interfaces between the IPT/solution provider CM organization and other FAA CM organizations • Interfaces between the IPT/solution provider CM organization and contractors/subcontractors
f. Section 4 – Configuration Management Phasing and Milestones	Includes the schedules of the following: • Release and submittal of configuration documentation in relation to life cycle program events (such as reviews) • Establishment of baselines • Implementation of configuration control • Establishment of configuration control boards • Implementation of the status accounting system • Conduct of configuration audits • Transition planning (e.g., In-Service Review participation)
g. Section 5 – Data Management	Describes the methods for the following: • Data identification • Data version control • Digital data transmittal • Data access control
h. Section 6 – Configuration Identification	Describes the following: • Selection of CIs • Establishment and management of development configuration • Establishment of baselines • Release of products • Assignment and application of configuration identifiers
i. Section 7 – Interface Management	Describes the procedures for identification of interface requirements and establishment of interface agreements
j. Section 8 – Configuration Control	Describes the following: • Functions, responsibility, and authority of configuration control boards • Classification of changes • Change proposal processing (NCPs, ECPs, variances, etc.)

CM Plan Section	Section Content
k. Section 9 – Configuration Status Accounting	Describes the following: • Methods for collecting, recording, processing, and maintaining data necessary to provide status accounting information • Description of contents of reports • Methods of access to information in status accounting systems. Identify CM tools, as appropriate.
l. Section 10 – Configuration Audits	Describes plans, procedures, and schedules for functional and physical configuration audits
m. Section 11 – Contractor/Vendor Control	Describes the methods for ensuring contractor/vendor compliance with the configuration management requirements
n. Appendices	Optional; appendices may include abbreviations and acronyms, definitions, and other generic information.